

Imagery Systems for Enhanced Crew Habitability, Performance and Productivity onboard ISS



M. Whitmore, Ph.D., M. Segal, V. Byrne, S. Ramsey, J. Chastain, R. Ortiz, and K. Smart M.D.

Usability Testing and Analysis Facility
Habitability Design Center
Habitability & Human Factors Office



Project Schedule



Task Name	2002				2003					2004					2005					
	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	2 Qtr	3 Qtr 4	l Qtr	1 0	Otr 2	Qtr:	3 Otr	4 Q1	r 1	Qtr 2	2 Qtr	3 Otr4	4 Qti
Survey																				
Functional reqts/Feasibility																				
Technology review																				
Analog testing																				
Delivery of interim progress report						∳ Deli	иегу	of int	erim į	rogi	res	sre	port							
Usability evaluation																				
Field testing																				
Validation																				
Delivery of interim progress report										фDе	live	гу с	of int	erim	prog	jres	sre	port		
Training materials																				
Implementation plan																				
Delivery of final report															♦ D	eliv	егу	of fin	al rep	ort



Project Progress



Functional Survey

- **Completed work:** Information has be collected and summarized into a report for Analog Environment Inhabitants responses.
 - An example of a strongly desired functionality involved the integration with an exercise system
- Continuing efforts: Survey data collection to continue in parallel with other activities and combined for the FY02 Interim Progress Report that will not negatively impact other activities
 - Survey distribution and analysis started later than expected because of working out Human Subjects approval issues for the survey
 - Survey task will be extended out until the beginning of the forth quarter due to the addition of new survey recipients (e.g. medical personnel and hardware engineers)



Project Progress (con't)



Functional Requirements/Feasibility and Technology Review

- Creating a list of functional requirements based on survey results and will continue to refine as more surveys are collected
- Researching current on-board systems such as payload specific displays, experiment specific displays and PDAs to determine possible fit for an Imagery System (e.g. Clio – compromise between PDA and laptop)
- Reviewing existing technologies not currently aboard ISS to compare with existing ISS requirements (e.g. translation, kickloads, and power limits).
- These milestones are on target and refinements will be made with new survey information



Project Progress (con't)



Analog Testing

- A Mission Objective Request (MOR) is in place to collect surveys from NEEMO Mission 2 crewmembers while still in habitat in May 2002.
- Beginning to prepare test plans for NEEMO Missions 3 & 4 to be held in July 2002 and Sept 2002, respectively.
- Beginning to prepare debrief questions for other Analog Environments (e.g. Antarctica).
- This milestone is ahead of schedule and will continue into the first quarter of the next fiscal year.